



# VIPER<sup>®</sup> HD

RETICLE EYEPIECE



MOA  
PRODUCT MANUAL

Rotate this ring to adjust the diopter setting.



Rotate this ring to fine tune the reticle orientation in uneven conditions.

## VIPER® HD RANGING RETICLE EYEPIECE

The Viper® HD Ranging Reticle's wide-angle eyepiece reveals the same excellent field of view you would see at the same magnification through the 20-60x zoom eyepiece, and the fixed power 33.5x magnification offers the highest level of resolution. Vortex's ranging reticle provides precise target range estimation.

This MOA-based Viper® HD reticle can be used to estimate distances, to call shots, and provide rapid MOA corrections for stray shots. It will be most useful when used in conjunction with MOA-based riflescopes.

## RANGING WITH THE MOA RETICLE

MOA measurements are very effective for ranging using simple formulas—knowing the size of the target or nearby object is essential.

$$\frac{\text{Target Size in Inches} \times 95.5}{\text{Measured MOA}} = \text{Range (Yards)}$$

$$\frac{\text{Target Size in cm} \times 34.37}{\text{Measured MOA}} = \text{Range (Meters)}$$

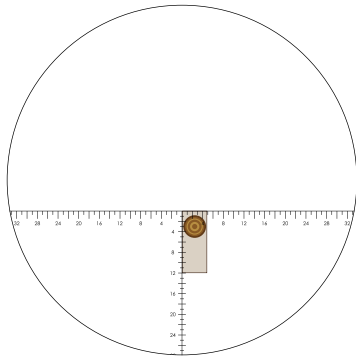
Using either the vertical or horizontal MOA scale, place the reticle on the target of known dimensions and read the number of MOA spanned. You will obtain maximum accuracy in ranging by calculating exact MOA measurements. MOA should be estimated in 1/4 MOA increments if possible. To help calculate fractions of MOA, the inner crosshair line thickness can be used as a reference.

**NOTE:** In the MOA ranging formula, a shooter may substitute 100 for 95.5

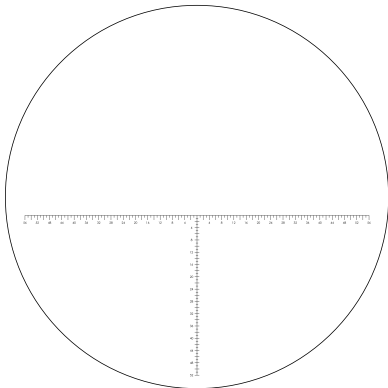
in the interest of speedier calculations. Be aware that this will produce a five percent over-estimation error of the yardage distance obtained.

**Example:** Ranging a 6-foot target (72 inches) at 12 MOA yields 573 yards.

$$\frac{72 \times 95.5}{12 \text{ MOA}} = 573 \text{ Yards}$$



Accurate measuring will depend on a very steady hold—be sure to use a high-quality tripod. Once you have an accurate MOA reading, use the formula to calculate the distance.



MOA Reticle



## VIP WARRANTY

OUR UNCONDITIONAL PROMISE TO YOU.

We promise to repair or replace the product. Absolutely free.

- ▶ **Unlimited**
- ▶ **Unconditional**
- ▶ **Lifetime Warranty**

Learn more at [VortexOptics.com](http://VortexOptics.com)

[service@VortexOptics.com](mailto:service@VortexOptics.com) • 800-426-0048

*Note: The VIP Warranty does not cover loss, theft, deliberate damage, or cosmetic damage not affecting product performance.*

M-00278-0  
© 2019 Vortex Optics  
® Registered Trademark and TM Trademark of  
Vortex Optics